



Australian Government

Department of Education, Employment and Workplace Relations

AURB254401A Select and adjust bicycle to fit rider

Release: 1

AURB254401A Select and adjust bicycle to fit rider

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit of competency describes the skills and knowledge required to select and/or adjust a bicycle to best fit the physical abilities and cycling requirements of the rider. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.
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Application of the Unit

Application of the unit	This unit applies to individuals who advise on the selection and adjustment of a bicycle and/or bicycle components to meet the needs of the rider. It applies to individuals working in a bicycle retail, service and repair environment.
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Gather information about the rider	1.1. Check and confirm customer requirements and cycling preferences 1.2. Assess physical attributes of customer by discussion, observation and measurements, if appropriate 1.3. Identify suitable bicycle types and configurations to match customer requirements 1.4. Discuss features and benefits of selected bicycles with customer
2. Adjust bicycle to fit the rider	2.1. Check that frame size matches rider's physical attributes 2.2. Check and adjust seat setting according to rider and manufacturer specifications 2.3. Check and adjust handlebars and stem settings according to rider and manufacturer specifications 2.4. Check and adjust clipless pedal settings to match rider's needs 2.5. Allow customer to test ride bicycle for riding comfort and efficiency 2.6. Make final adjustments as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- technical skills to the level required to safely use tooling and equipment to adjust bicycle components
- communication skills to the level required to confirm work requirements and specifications, to communicate effectively regarding work requirements with supervisor, other workers and customers, to report work outcomes and problems, and to relate to people from a range of social, cultural and ethnic backgrounds and of varying physical and mental abilities
- literacy skills to the level required to understand information related to bicycles, including common industry terminology, to prepare reports and interpret technical information and specifications

REQUIRED SKILLS AND KNOWLEDGE

- numeracy skills to the level required to correctly complete tests and measurements
- problem-solving skills to the level required to identify non-optimal bicycle fit and make required adjustments
- team skills to the level required to work effectively and cooperatively with others to optimise workflow and productivity

Required knowledge

Required knowledge includes:

- bicycle terminology
- types and classifications of bicycles
- manufacturer and/or component supplier specifications
- biomechanical principles of cycling
- testing procedures and adjustment methods
- tools and equipment used in bicycle adjustment
- Australian standards applicable to bicycles
- applicable commonwealth, state or territory legislation, regulations, standards and codes of practice, including occupational health and safety (OHS), personal safety and environment, relevant to adjusting bicycles
- organisational policies and procedures, including quality requirements, reporting and recording procedures, and work organisation and planning processes, related to adjusting bicycles

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors must be satisfied that the candidate can competently and consistently:

- observe safety procedures and requirements
- communicate effectively with customer to determine requirements
- recommend bicycle types to suit customer requirements
- identify and assess variables that affect cycling comfort, stability, efficiency and aerodynamics
- complete adjustment of components to optimise cycling comfort, stability, efficiency and aerodynamics.

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or a simulated environment that reflects as far as possible the actual working environment.
- Assessment is to occur using standard and authorised work practices, safety requirements and environmental constraints.
- Assessment is to comply with relevant regulatory requirements, including specified Australian standards.
- Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.
- The following resources should be made available:
 - a range of bicycle models and components
 - equipment and tools appropriate to adjusting bicycles
 - technical specifications and standards
 - workplace documentation.

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of this Training Package.
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of Required Skills and Knowledge.
- Assessment methods must be by direct observation of tasks and include questioning on Required Skills and

EVIDENCE GUIDE	
	Knowledge to ensure its correct interpretation and application. • Assessment may be applied under project-related conditions (real or simulated) and require evidence of process. • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances. • Competence in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role.
Guidance information for assessment	Assessment processes and techniques must be culturally sensitive and appropriate to the language and literacy capacity of the candidate and the work being performed.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
Bicycles	Bicycles may include: • those with and without gears, and with lever operated brakes • children and adult models of different heights • mountain, road, hybrid, BMX, track and trials models
Best fit considerations	Best fit considerations may include: • comfort • stability • efficiency • aerodynamics • fitness for purpose
Rider measurements	Rider measurements to be considered may

RANGE STATEMENT	
	include: • height • body shape • length of arms and legs • fitness
Bicycle adjustments	Bicycle adjustments for best fit may include: • frame size • crank length • distance from crank centre or bottom bracket to saddle • saddle angle • seat tube angle and saddle offset • distance from saddle to handlebar • relative height of saddle and handlebar • handlebar width, angle and lever reach • handlebar drop on road style handlebars • clipless pedal tension, and position of pedal and shoe
Tooling and equipment	Tooling and equipment may include: • hand tooling • floor stand and workbench
Testing	Testing is to confirm: • safety, comfort and efficiency • stable handling, turning and steering • no failure in parts of the bicycle
Information/documents	Information/documents may include: • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets (MSDS), diagrams or sketches • safe work procedures related to adjusting bicycles • regulatory/legislative requirements pertaining to bicycle safety • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or

RANGE STATEMENT	
	external persons • Australian standards
OHS requirements	OHS requirements are to be in accordance with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include: • personal protective equipment and clothing • safety equipment • first aid equipment • hazard and risk control • elimination of hazardous materials and substances • manual handling, including shifting, lifting and carrying • emergency procedures
Legislative requirements	Legislative requirements are to be in accordance with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice, and may include: • award and enterprise agreements • industrial relations • Australian standards • Australian Design Rules • confidentiality and privacy • OHS • the environment • equal opportunity • anti-discrimination • relevant industry codes of practice • duty of care
Environmental requirements	Environmental requirements may include: • waste management • noise • dust • clean-up management
Quality requirements	Quality requirements may include: • regulations, including Australian standards • internal organisational quality policies and procedures

RANGE STATEMENT	
	enterprise operations and procedures
Organisational policies and procedures	Organisational policies and procedures may include: - quality policies and procedures, including Australian standards - OHS, sustainability, environment, equal opportunity and anti-discrimination - manufacturer specifications and industry codes of practice - safe work procedures - reporting and recording procedures

Unit Sector(s)

Unit sector	Bicycle
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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